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Expert Report

J.B.D.L. Corp. d/b/a Beckett Apothecary, et al. v. Wyeth-Ayerst Laboratories, Inc., et al. (Civil Action No. C-1-01-704); McHugh Pharmacy Wynnewood, Inc. d/b/a Tepper Pharmacy, et al. v. Wyeth-Ayerst Laboratories, Inc., et al. (Civil Action No. C-1-01-745) (S.D. Ohio, Western Div. At Cincinnati)

Table of Contents

Qualifications and Scope of Work

Qualifications

I am an expert in the field of pharmaceutical prescribing and the market forces that influence this critical process in health care. My experience spans over thirty years in diverse health care practice and business settings. My background has given me a first hand understanding of the market dynamics involved in influencing clinical decision making.

Background

My background is detailed in the attached curriculum vitae (see **Attachment A**). As an overview, I am a board certified internist with a subspecialty in Rheumatology. I have practiced medicine for over 30 years and have held the position of chief executive officer (CEO) at 3 different health maintenance organizations (HMOs). I have been the CEO of an 800-physician multi-specialty group practice (the UCLA Group Practice). I have been the Vice President of a major health insurance underwriter (Met-Life) with budget responsibility for over $1.2 billion per year in health care spending. I have served as the Chief Medical Officer - insurance products - for a major hospital corporation (Sutter Health). In addition, I have chaired the Pharmacy & Therapeutics Committee at a managed care organization (Omni) and at a Pharmacy Benefit Manager (Pharmaceutical Care Network).

I served as the Medical Director for CASIO Corporation's Vertical Development Group in San Jose. This unit specialized in personal data appliances (PDAs) in a local area network (LAN) wireless environment. Specifically, our group was tasked to facilitate the generating of prescriptions by physicians on a PDA in a wireless clinical environment. Part of this assignment included the development of RxPhysician.com.

RxPhysician.com developed, with CASIO's technical assistance, a working wireless product used for prescribing which was installed in both the Santa Barbara Clinic in California and the Straub Clinic in Hawaii. The dynamics of physician decision making in pharmaceutical product selection was analyzed in depth during this engagement.

I have also worked on a retained basis with multiple software companies that have developed products for the medical environment. Some of these companies are: Software AG out of Germany; IKON Software development in Tucson AZ; STAR Information Technology Corporation, divine Software – a software development and integration company in Chicago.

My consulting practice has also involved the pharmaceutical distribution market. I have served as Longs Drug Stores chief medical consultant, strategic advisor to RxAmerica – a PBM joint owned by Longs and Albertsons, and now serve as the Medical Director for Pharmaceutical Care Network (PCN) – a Pharmacy Benefit Manager (PBM) owned by the California Pharmaceutical Association.

I currently own a privately held company, Illumination Medical, Inc. This company specializes in data mining. Illumination Medical analyzes medical and pharmacy claims to predict serious chronic illness in a population of beneficiaries before the disease

process becomes catastrophic. The company targets interventions by case management. Illumination Medical markets its services to self funded trusts and union Taft-Hartley accounts.

I have also started a second company, the Fraud Prevention Institute (FPI) that specializes in fraud prevention within the health care industry. FPI is made up of former MediCal and FBI investigators who have been working on investigating and prosecuting fraudulent activity within health care for many years.

A listing of the publications I have authored in the preceding ten years can be found in **Attachment B**.

Scope of Engagement

It is my understanding that co-lead counsel – Spector, Roseman & Kodroff, P.C. and Berger & Montague, P.C. - represent a class of plaintiffs that includes most of the distribution system for pharmaceuticals within the U.S. market. This class includes the largest drug wholesalers, as well as the largest chain retailers (excluding CVS and Rite Aid who have opted out) along with the independent retail pharmacies in the U.S.

These plaintiffs assert that Wyeth-Ayerst Laboratories, Inc. ("Wyeth") had a dominant market position in oral estrogen products and unlawfully leveraged its monopoly power. The purpose and effect was to limit access of its oral estrogen competitors including its closest competitor, Cenestin, to PBM and managed care organization (MCO) formularies.

I was asked to prepare the following report in order to provide an expert perspective on how Wyeth accomplished its anticompetitive objective using exclusive dealing and market share incentive based contracts within the health care industry.

Specifically, I will analyze the cumulative effect of this successful marketing strategy and how it influenced the decision making process by American physicians as they selected estrogen products for their patients.

- My report will analyze the consequences of Cenestin being excluded, as a result of Wyeth's successfully executed marketing strategy, from substantially all major managed care formularies from Cenestin's market introduction in 1999 to the present.
- The implications of this systematic exclusion will be viewed from the clinical perspective.
- My report will focus on the technical and financial aspects involved in the delivery of pharmaceutical products in the retail pharmacy setting. I will show how Wyeth exploited these delivery structures to decrease the likelihood that Cenestin would be selected by prescribing physicians across the country.

My report is based on industry articles I have reviewed together with my own thirty years of experience in the clinical, academic, retail pharmacy and PBM industries. In preparing my report I have reviewed documents produced in the J.B.D.L. litigation provided to me by co-lead counsel.

Co-lead counsel has retained my services at a rate of $300 per hour for research and $500 per hour for testimony time on this project. I have testified in the past as an expert in a deposition. Specifically, I rendered an opinion in Duramed Pharmaceuticals Inc. vs.

Wyeth-Ayerst Laboratories, Inc., Civil Action No. C-1-00-735, In the United States District Court for the Southern District of Ohio.

In preparing this report:

- I reviewed the medical literature as to the effect managed care formularies have had on the prescribing patterns of physicians.
- I consulted with my peers in practice in multiple markets across the country.
- I selectively reviewed some of Wyeth's documents that dealt with the issue of formulary structure.
- In addition, I reviewed my prior expert report and testimony in the Duramed Pharmaceuticals Inc. vs. Wyeth-Ayerst Laboratories, Inc., Civil Action No. C-1-00-735, In the United States District Court for the Southern District of Ohio.
- I drew upon over 30 years of experience in the clinical practice of medicine, Medical Group Practice Management, HMO development and management, consulting activities and PBM medical directorship.

Summary

This paper details how Wyeth, a large and sophisticated marketing organization, used its market dominance in the conjugated estrogen therapy / hormone therapy (ET/HT) market to target and limit competition. Specifically, Wyeth identified Cenestin as a threat to its conjugated estrogen franchise and set about to attack its market entrance by addressing all levels of the prescribing and distribution chain for pharmaceutical products.

The report will explain how the pharmaceutical sector of the health care market is organized. It will trace the process by which drugs are developed and distributed throughout the system. It will explain how the decision making process by both the physician and the pharmacist have been, for the most part, curtailed and circumvented by managed care restrictions on the deliberative process.

The key for manipulating the pharmaceutical market within the managed care structure is the pharmaceutical benefit management (PBM) company. This report examines this segment of the industry in detail. Pharmaceutical products are no longer evaluated based upon their relative scientific merit within the market. Now they are favored by business decisions that are influenced by the size of the rebate paid by the pharmaceutical manufacturer to these PBMs and the managed care organizations (MCOs) that either own or hire them.

Particular attention is paid to the Formulary. How these ubiquitous lists of "preferred" drugs are created and how the co-payment structure is designed is described in detail using Wyeth's own internal documents and contracts as resource material. Formulary placement is driven by the various "rebates", "administrative fees" and "service fees" that are in almost every Reimbursement Agreement Wyeth consummated with the various PBMs and MCOs across the country.

The damaging effect these business driven decisions have in the clinical setting is told using direct quotes from physicians taken from documents generated through the discovery process within this legal action, my 30 years of experience collaborating with other practicing physicians and through my review of the published literature. Physicians are overwhelmed with the complexity of multiple disparate and non-intuitive formularies that list drugs as preferred. Physicians have learned that formularies are not intuitive. They know that a drug's preferred status is not based upon the scientific literature they read but rather on the rebate driven deals that are consummated between the pharmaceutical manufacturers and the PBMs/MCOs that make formulary decisions.

The last portion of the report examines Wyeth's marketing strategy. Early in the process of bringing Cenestin to the market, Wyeth targeted this drug as a threat to its women's health care "conjugated estrogen single source and exclusive franchise." The report, using Wyeth's own documents, traces Wyeth's leveraging of its established and dominant market position to systematically damage a competitor's entry into the market.

Wyeth created and then executed a comprehensive strategy which it titled the "Premarin Pre-emptive Plan." The plan called for both positive reinforcement of the "scientific" basis for the use of Wyeth's conjugated estrogen products to justify a preferential basis above all other options in the market; and contract based discipline for any PBM or MCO that would give access to conjugated hormone replacement/estrogen replacement (HR/ET) therapeutic options in the clinical setting.

This report concludes by examining Wyeth's use of its market position to enforce its dominance through the contracts it negotiated and executed with most of the larger PBMs and MCOs in the market. The following is a representative, though certainly not a comprehensive, sampling of the tactics Wyeth used to advance its market objectives:

- Wyeth required that Premarin be the *exclusive, sole or preferred* conjugated estrogen on the PBM/MCO formulary.
- *All* products within a Wyeth "product grouping" must be *preferentially* listed on the formulary for *any* of the group products to be eligible for a rebate.
- Wyeth *required* that a minimum number of its product groupings must appear on formulary for the PBM/MCO to qualify for *any* rebates.
- Rebates were tied to Wyeth products' market share *increases*.
- Rebates were also tied to Cenestin's market share *decreases*.
- Rebate percentages *increased* as additional Wyeth products were included on formulary.
- National Drug Code (NDC) blocks were *required* to lock out competitors' products at the point of dispensing.
- Additional monies were paid as "Administration Fees" and/or "Service Fees" by Wyeth to selected PBM/MCO clients for services rendered to Wyeth.
- Specific formulary *promotional efforts* were required of some PBM/MCOs.
- Wyeth had the option of applying formulary promotional efforts to some PBM/MCO contracted physicians and pharmacies.
- PBM/MCO contracted pharmacies *must dispense as written*, without changing to a competing product.
- Wyeth leveraged their position threatening loss of rebates if competing products were put on formulary

Perhaps the most effective use of the above described contractual agreements involved the demonstration, by Wyeth's representatives, of the consequences that a PBM/MCO would face if they gave clinical access to Cenestin. The report documents instances using Wyeth's own internal documents wherein PBMs/MCOs were threatened with the loss of millions of dollars in rebate funds for providing the option of Cenestin on their formularies. These documents further substantiate that when faced with these consequences the offending PBMs/MCOs withdrew that access.

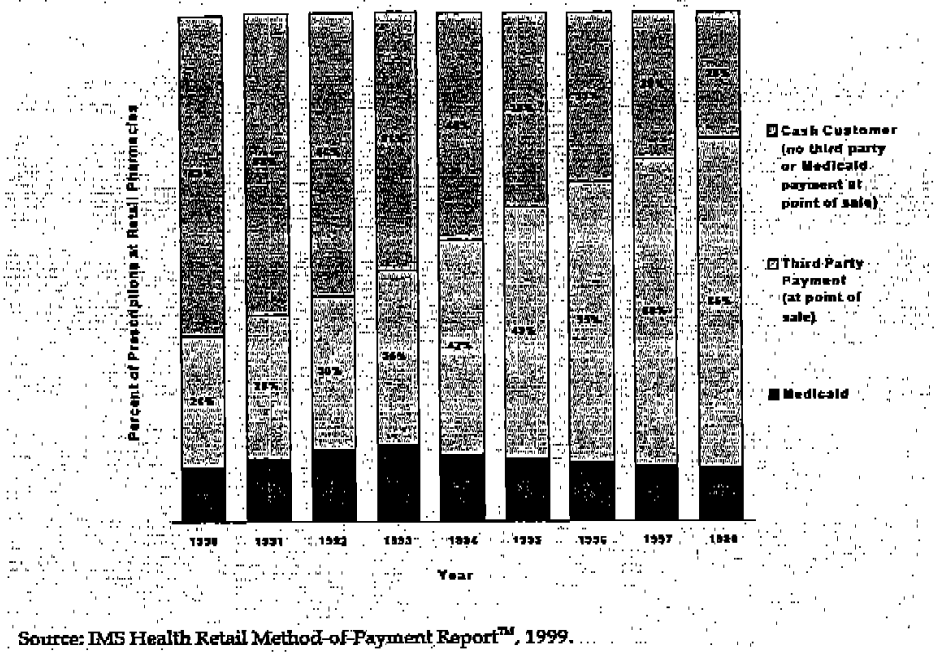
Manipulating the underwriting system that finances America's health care system has real consequences. Those consequences are magnified when a market competitor, like Wyeth, uses its dominance in the conjugated ET/HT market to inhibit competitors. Patients and their physicians are denied access to therapeutic alternatives and the market's ability to drive product cost down through cost/quality competition is circumvented.

The Pharmaceutical Market in the United States

Managed care's influence on the pharmaceutical industry

The influence of managed care as the dominant third party payer within the pharmaceutical market has been profound. The number of purchasers who pay in full at the time of the transaction (referred to as cash customers) has been steadily decreasing in recent years. This category includes both those with no insurance coverage for drugs and those with indemnity coverage who file claims when the retail transaction is complete. In 1990, 63 percent of retail prescriptions involved cash customers, while 37 percent involved billing by the pharmacy to third-party payers or Medicaid. By 1998, only 25 percent of prescriptions were paid for by cash customers.[1]

Payment Sources for Prescription Drug Purchases, 1990-1998



Source: IMS Health Retail Method-of-Payment Report™, 1999.

It should be noted that the above trend does not represent a growth of coverage as much as it represents a shift in how drug coverage works. During the 1990s, the common approach has shifted from indemnity coverage with front loaded deductible financial liability for the patient to coverage that is managed at the point of sale with first dollar coverage.

[1] IMS Health Retail Method-of-Payment Report; 1999.

With indemnity insurance, the customer typically pays cash for the full cost of the prescription at the pharmacy and then files a claim for reimbursement from the insurer. Now most beneficiaries with private group coverage for prescription drugs have some form of managed drug benefit administered by a PBM or occasionally directly by an HMO or other underwriter. Under PBM administration, point of sale transactions are now the norm. Within such a transaction, the pharmacist uses a computer system to determine the deductible, copayment, or coinsurance, which the customer pays at the retail counter.[2]

This report will describe how managed care influence on the pharmaceutical industry has resulted in evolving complex contractual relationships between pharmaceutical manufacturers, PBMs, MCOs and pharmacy providers. These contractual relationships have directly influenced physician prescribing choices, and pharmaceutical product market share. The report will also detail how Wyeth, as one of the most sophisticated competitors in this contract based market, exploited its dominant position in the ERT/HRT market to limit competition.

Wyeth is one of the health care industry's largest pharmaceutical manufacturers. It dominates a category of pharmaceuticals, known as conjugated estrogens. Wyeth's conjugated estrogen product comprises a constellation of products labeled by Wyeth as the "Premarin Family."[3] The Premarin Family of products includes: Premarin (conjugated estrogens in strength per tablet ranging from 0.3 mg to 2.5 mg); Premphase (a dose pack containing a one month supply - the first half consists of 0.625 mg conjugated estrogens; the second half contains 0.625 mg conjugated estrogens and 5 mg medroxyprogesterone); Prempro (conjugated estrogens/ medroxyprogesterone acetate tablets).

The "Premarin Family" of products was tracked collectively as well as individually by Wyeth. The following, taken from a 1999 Performance Review by Wyeth illustrates this point:

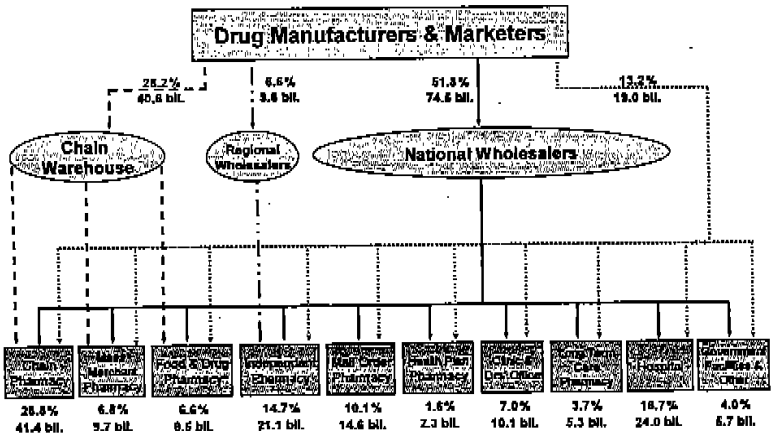
> "In 1998, the Premarin Family constituted 39 percent of direct brand profit to Wyeth's North American business unit equating to 19 percent of total AHP income before tax.
>
> May 1999 net sales for the Premarin Family are $564,046 million. This is 4% over budget and 1% over the same period last year. Projected 1999 net sales are expected to be $1,516,037 billion, a 15 percent increase over 1998.
>
> The Premarin Family of products continues to dominate the ERT/HRT market-place capturing 88 percent of new starts making it the most prescribed product of all categories in the United States. New prescription shares (71.9% MAT May 99) and total prescription share (73.0% MAT May 99) for the family also remains strong despite new entries into the market place (i.e. Evista and Cenestin)."[4]

[2] http://aspe.hhs.gov/health/reports/drugstudy/c3.pdf
[3] WYE 180534
[4] WYE 180534

Pharmaceutical distribution system (wholesalers, mail order and retail sales)

Prescription drug therapy costs are one of the fastest growing components within healthcare. Multiple entities are involved in the distribution of pharmaceutical products, from the manufacturer to the consumer. The primary participants in this distribution system are pharmaceutical manufacturers, wholesale distributors, retail pharmacies, mail order pharmacies, governmental agencies, physicians, and pharmaceutical benefit management companies (PBMs). The following graphic illustrates the interrelationship of each of the above entities and demonstrates the complexity of the distribution system for pharmaceuticals in the U.S. market.

Channels of Distribution for Prescription Drugs: 1999



Source: Compiled by PRIME Institute, University of Minnesota from data found in IDDD Annual Class of Trade Analysis (Plymouth Meeting, PA: IMS, 1999).

Manufacturers, such as Wyeth and others, distribute their pharmaceutical products to wholesale distributors, such as AmeriSource/Bergen, McKesson and Cardinal Health and, to a lesser extent, directly to retail, chain, mail order and independent pharmacies.

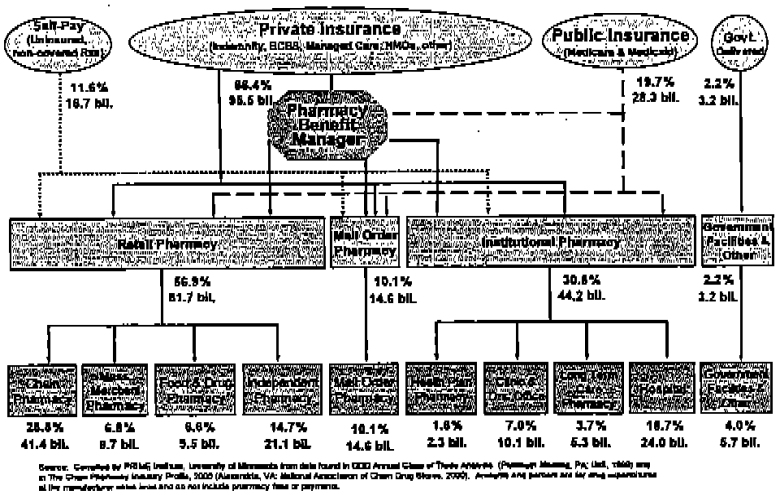
Pharmacies complete the distribution process, providing pharmaceuticals to the end user, the patient, upon the written prescription from the patient's physician.

Pharmaceutical payment system

Payment cycle for pharmaceuticals

Much like the distribution process for pharmaceuticals, the payment cycle also involves multiple entities in the flow of financial remuneration from the party paying for the product back to the pharmaceutical manufacturer. The following graphic summarizes the complexity of this payment process in the U.S. pharmaceutical market.

Sources of Payment for Prescription Drugs: 1999



Pharmacy patients can be divided into two categories. The first category includes Medicare beneficiaries and those without health insurance. These "cash patients" pay for their prescriptions in total with their own cash out-of-pocket generally at retail rates.

The second category includes those individuals who are covered by a third-party health plan that includes a drug benefit. Thus, these third-party payment patients have a health plan or governmental agency paying part or all of their prescription costs.

The payment cycle for pharmaceuticals begins at the pharmacy with the patient and/or patient's health plan, paying the pharmacy their usual and customary retail price, or negotiated contract price, for their prescription.

Pharmacy Benefit Managers or PBMs function as fiscal intermediaries between a patient's health plan and their pharmacy provider, administering payment to the pharmacy on behalf of the health plan, for pharmacy services provided to their members.

The pharmacy provider pays the wholesaler or drug manufacturer if they acquired the drug directly from the manufacturer.

In some cases the drug manufacturer pays a rebate back to the PBM or MCO for specific drugs dispensed to their members that are on the PBM's or MCO's formulary. These rebates may or may not be shared with the PBM or the MCO's client, the underwriters and employers.

Establishment of acquisition cost for pharmaceuticals

Pharmaceutical manufacturers establish a suggested wholesale price (SWP) or direct catalog price (DCP) for each of their products, unique by strength, dosage strength and package size. The average of the actual acquisition prices charged by the national drug wholesalers in the market for a given pharmaceutical product is referred to as the product's "average wholesale price" or AWP.

AWP is the industry benchmark from which most brand pharmaceutical pricing formulas among PBMs, pharmaceutical manufacturers and pharmacies are derived. AWP is published and maintained by industry sources such as the "Red Book", published by Thompson Medical Economics, and First DataBank of San Bruno, California.

Drug wholesalers acquire their brand pharmaceutical products from manufacturers at a discount off of the AWP price, which is then referred to as the "wholesale acquisition cost" or WAC.

Pharmacies acquire their brand pharmaceutical products from drug wholesalers at a discount off of the AWP price, usually between 17% and 21%; or directly from manufacturers at their "direct catalog price" (DCP) with possible discounts factored in.

PBMs enter into contracts with retail pharmacies with defined reimbursement terms for prescription services provided to their members. Those reimbursement terms reflect a discount off of the brand drugs' cost (e.g. 10% to 17%), plus a dispensing fee (generally $1.00 to $3.00 per transaction)

PBMs also enter into contracts to obtain rebates from the manufacturers in exchange for placement on the PBM's formulary. Drug manufacturer rebates are usually defined as a percentage of the DCP of the drug dispensed (e.g. 3% to 15%). The magnitude of the rebate is influenced by the in-class options available on the market (e.g. single source drugs generally have low rebate structures).

The percentage of the rebate passed through by the PBM or the MCO to the paying third-party has, historically, been highly variable. In the past, when third-party underwriters did not know about or understand rebates, the percentage was low or non-existent. As third-party understanding increased, the percentage has increased. However the opaque business practices of the PBMs and the MCOs remain problematic to the present.

Pharmaceutical manufacturers may also pay administrative fees to PBMs for administering their rebate programs. These administrative fees are usually defined as a percentage of the DCP price of the manufacturer's brand drugs being dispensed (e.g. usually1% to 3%). PBMs may or may not pass on some of the manufacturer's rebate received to their client, but generally do not pass on the administrative fee received from the manufacturers.

At the point-of-service in a retail pharmacy when a patient receives their prescription they pay 100% of their prescription cost if they are a "cash" patient or, if they are a third party patient, they pay a portion of their prescription cost, the copayment, with the remainder of the cost billed to their health plan that subsequently pays the pharmacy.

Managed care's dominance of the pharmaceutical market in the United States[5]

Background

Managed care now dominates health care in the United States. By 1999, only 8 percent of persons with employer-sponsored health insurance coverage had traditional indemnity insurance. This reflects a sea change in the past two decades -- not just in the financing of health insurance but also in the way medicine is practiced.

The rapid growth of managed care is not primarily due to enthusiasm for this approach on the part of patients or providers. Patients have had mixed reactions to managed care; they like the low copayments and reduced paperwork that accompanies the filing of claims but view some managed-care practices as emphasizing cost control over quality. In fact, there is widespread concern among the public, physicians, and legislators about the effect of managed care on the quality of care.

Purchasers have rarely chosen health plans on the basis of the quality of care. Assuming that licensure of plans and licensure of providers are sufficient to ensure high quality, they have chosen plans primarily on the basis of price.

The leading MCOs

The following organizations have significant HMO enrollment or either own or are Blue Cross Blue Shield organizations that are trying to build regional positions and have large Preferred Provider Organization (PPO) enrollment.

	*Total HMO Lives	*HMO Lives as Percentage of Insured Lives	
		2002	2001
Kaiser	8,330,000	100%	100%
Aetna	8,131,000	59%	65%
CIGNA	6,750,000	52%	49%
United	6,325,000	36%	64%
Humana	5,453,900	82%	82%
WellPoint	4,973,000	38%	40%
Anthem	4,941,000	45%	45%
Health Net	4,855,000	89%	89%
PacifiCare	3,012,500	96%	99%
Coventry	1,640,000	81%	86%
Oxford	1,549,600	97%	100%

[5] *The New England Journal of Medicine*; R. Adams Dudley, M42.D., M.B.A., Harold S. Luft, Ph.D.; University of California, Health Net San Francisco; April 5, 2001; Vol. 344, No. 14

Highmark	1,340,900	42%	41%
Mid Atlantic Medical Services, Inc. (MAMSI)	758,900	38%	NA%
Harvard	718,900	96%	96%
Blue Care Network	676,300	100%	100%

* Note: HMO enrollment includes Commercial, Medicare and Medicaid lives.
Data Source: HSG & AHP 295619 (Managed Markets Diagnostic Report – Tactical; September 2003.

HMO enrollment declined 4% overall in 2002. A shift of lives to PPO products is the primary factor in overall HMO enrollment decline.[6]

Effects of Managed Care

Effect on Physicians

Nearly 91 percent of physicians contracted with MCOs in 2001. For those who do, almost 46 percent of practice revenue is derived from managed care sources, up 3 percentage points from 1997. In addition, the average number of managed care contracts per physician rose during this period – from 12.4 to 13.1 – despite consolidation in the managed care industry.[7] As a result, physicians are acutely aware of managed care restrictions placed upon them, such as drug formulary restricted prescribing behavior.

Effect on Patients

Managed care has resulted in major changes for patients and their experience with health care. Measures adopted by managed-care organizations to control costs or improve the quality of care, or both, include primary care gatekeeping, preauthorization of referrals, utilization review, profiling of physicians (monitoring of their patterns of utilization or the quality of their care), pharmaceutical restrictions, practice guidelines, case management, and most recently, disease management. Patients' reactions to these measures depend primarily on whether they are perceived as attempts to limit expenditures or to ensure proper care. Thus, gatekeeping is often not well received, because people rarely believe its purpose is to maintain or improve the quality of care.[8,9]

Gatekeeping intertwines the roles of physicians and healthcare organizations. This enmeshment benefits delivery systems because the population trusts healthcare organizations much less than it trusts doctors.[10]

Effect on Employers

The employers' desperation resulting from unremitting increases in the cost for the pharmacy benefit is now demonstrating itself in the market. As companies put the finishing touches on 2004 employee benefit design changes, they stepped up adoption

[6] AHP 295619 (Managed Markets Diagnostic Report – Tactical; September 2003.
[7] http://www.managedcaremag.com/archives/0301/0301.commmon.html
[8] A verdict on gatekeepers [editorial]. *New York Times* 2001 Nov 15:30
[9] Mechanic, D. & Schlesinger, M. The impact of managed care on patients' trust in medical care and their physicians. *JAMA* 1996; 275: 1693–1697 .
[10] Health Services Research and Development Center, Department of Health Policy and Management, Bloomberg School of Public Health, Johns Hopkins University, Baltimore, MD 21205, USA; http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=152368

of time-tested approaches to slow spending on prescription drugs - and are evaluating a few new strategies.

Techniques like mandatory mail-order fulfillment requirements and four-tier pharmacy designs have been around for a few years but used by a minority of payers. Continued increases in health premiums have led more employers to embrace those techniques to lower drug spending.[11]

The most common plan design change for 2004 is to require enrollees to use mail-order services rather than retail pharmacies to fill prescriptions for chronic-illness medications. For years, employers have encouraged members to use mail-order services for maintenance medications, since such services can be less expensive, but have not made their use mandatory.[12]

Employers are now generally are more aggressive than are health insurers in pushing members to convert prescriptions from retail to mail-order fulfillment. Employers are continuing to widen the difference between co-pays for second- and third-tier formulary medications. They are also stepping up the number of drugs subject to step-therapy requirements, in which a patient must first try a generic or lower-cost drug before a brand-name or higher-cost medication would be covered.[13,14]

Pharmacy Benefit Managers (PBMs)

The PBM's role in the distribution process

In response to dramatic managed care growth and the resulting unmet need for pharmacy benefit management, specialized companies came into existence to provide prescription drug benefit management for a broad spectrum of customers. These pharmacy benefit management companies, commonly referred to as PBMs, have taken a dominant role in the management of prescription drug benefits.

PBMs originally developed from insurance claim processing and mail order prescription companies into the management of drug benefits. PBMs manage pharmacy benefits for employers, insurance companies, managed care groups, and Medicaid. There are approximately 100 PBMs in the U.S., but the top four companies dominate the industry.

PBMs may provide administrative services and/or clinical services to their clients. Administrative services include client service, pharmacy network administration, mail pharmacy, claims adjudication, member services, and manufacturer contracting and rebate administration. Clinical services range from formulary management to sophisticated disease management programs.

In general, self-insured employers and insurance carriers outsource both administrative and clinical services to a PBM. Managed Care Organizations (MCOs), including HMOs, PPOs and some insurers and self funded trusts may elect to retain formulary and clinical control, including manufacturer contracting, and outsource only administrative services, such as claims processing and benefit administration, to a PBM.

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[11] "Managing Drug Costs"; *MANAGED CARE WEEK*; Nov 11, 2003,
[12] "Managing Drug Costs"; *MANAGED CARE WEEK*; Nov 11, 2003,
[13] "Managing Drug Costs"; *MANAGED CARE WEEK*; Nov 11, 2003,
[14] http://www.aishealth.com/DrugCosts/MCWAggressive.html

PBM services revolve around the drug benefit designed by the client. The benefit design determines the therapeutic categories of drugs that are covered -including whether cosmetic, lifestyle, and over-the-counter (OTC) drugs are reimbursed-and the extent to which generics and formulary drugs are mandated.

PBMs function as aggregators in the pharmacy industry. They aggregate large patient populations through their contracts with health plans, self-insured employers, municipalities, and other clients. These large groups of prescription purchasers provide leverage for the PBMs in their negotiations with pharmacies when contracting for their prescription reimbursement rates.

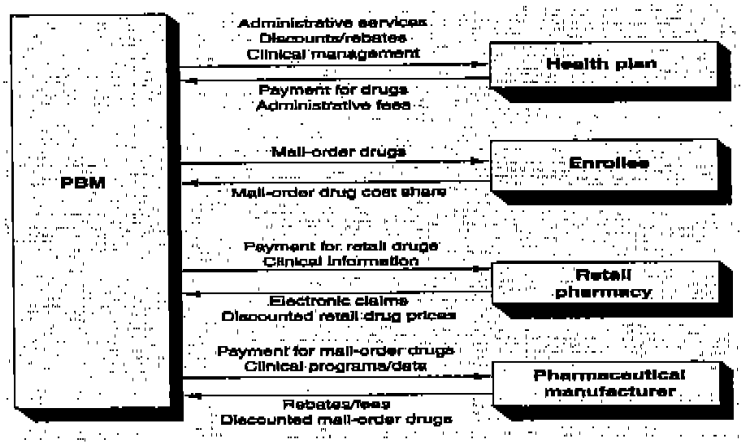
PBMs also aggregate pharmacy providers to create pharmacy networks for their clients to which their members are directed when needing prescription services. PBMs often leverage participation in their pharmacy network, or potential exclusion from their network, in their prescription reimbursement negotiations with pharmacies for discounted prescription pricing.

PBMs also rely on their large aggregated population groups for leverage when negotiating with drug manufacturers for rebates for their managed care organization (MCO) clients. These large population groups give the PBMs the ability to influence market share of pharmaceutical products through their formulary process and pharmacy benefit plan design features. Market share is a very important issue to pharmaceutical manufacturers. The rebates pharmaceutical manufacturers pay to PBMs are often tied to the market share performance of their pharmaceutical products or the structural incentives the PBMs build into their formularies to favor the manufacturer's products. . The amount of the rebate returned to the client health plan is difficult to quantitate on an industry level given the opacity of business practices endemic within the industry (see below).

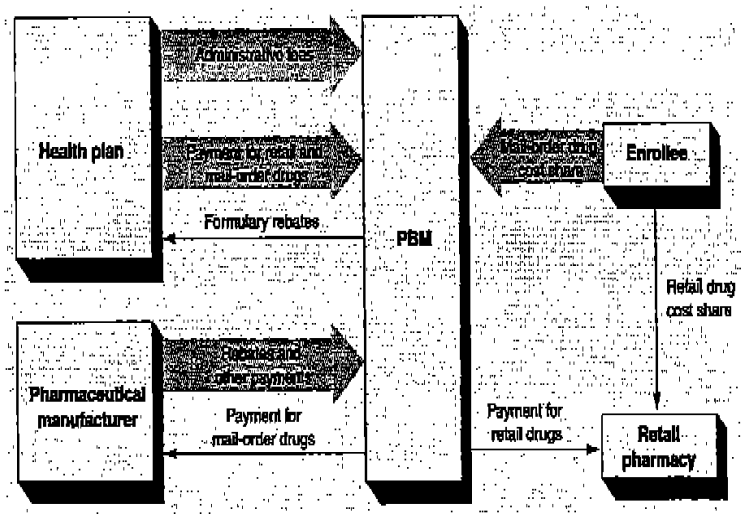
PBM overview

The role of the PBM within the pharmaceutical market is summarized in the following graphic.[15] The graph demonstrates the market relationships between the PBM and the structural components that make up the market.

[15] Federal Employees Health Benefits: Effects of Using Pharmacy Benefit Managers on Health Plans, Enrollees, and Pharmacies (January 2003); www.gao.gov



The PBM's sources for compensation are summarized as follows:



PBM services / client contracts

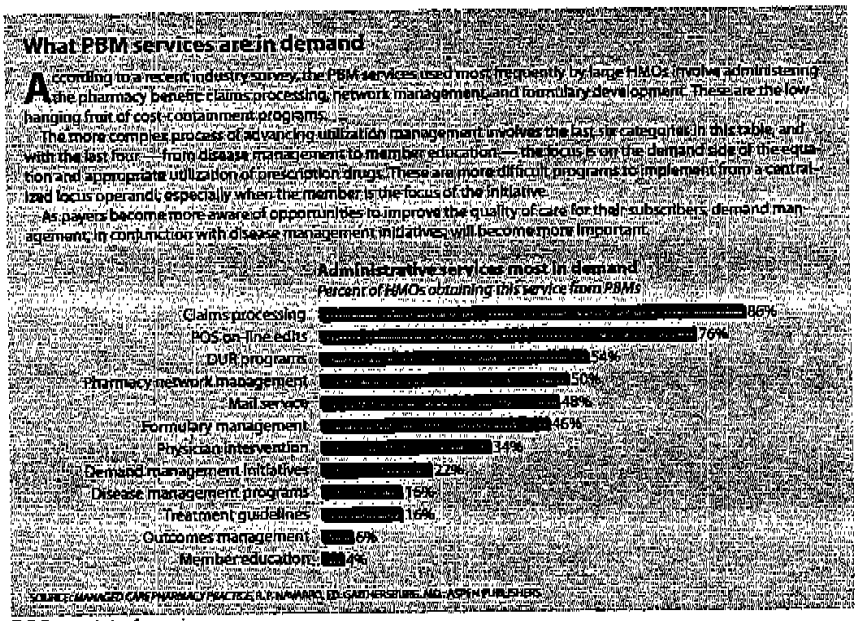
PBMs market themselves as having the ability to manage pharmacy benefit costs for their clients in several ways, two of which are (1) obtaining retail pharmacy price discounts, and (2) obtaining rebates from brand pharmaceutical manufacturers.

PBMs develop national pharmacy networks that are under contract to provide prescription dispensing services at negotiated reimbursement rates, offering discounted prices to their client's members. PBMs will often negotiate price discounts with retail pharmacies reflective of the size of the population base represented by their clients' members and the number of competing pharmacies included in the PBM's pharmacy network; the larger the population of members and the more restrictive the pharmacy

network, the greater the discount negotiated by the PBM for pharmacy services on behalf of their client.

PBMs offer formulary services to their clients as an intended cost containment tool. Formularies were originally intended to assist physicians in making cost-effective drug therapy choices. Formularies also attract rebates from the brand pharmaceutical manufacturers which have their products listed on the PBM's formulary.[16]

The following graph demonstrates the scope of services delivered by most of the larger PBMs and the relative market value each holds.[17]



POS – point-of-service
DUR – drug utilization review

PBM Effectiveness in controlling cost

PBMs manage about 70% of the more than 3 billion prescriptions dispensed in the U.S. annually. There is, however, considerable skepticism as to the effectiveness of PBMs in controlling overall pharmaceutical cost trends. Empiric evidence is lacking as to the effectiveness of PBM cost control techniques. Prescription expenditures continue to increase and have been the most rapidly growing component of the health care cost equation in recent years. This indicates that cost control mechanisms have not been effective.

Furthermore, misaligned PBM priorities appear to be actively driving pharmacy costs upward. Payers, such as MCOs and employer groups, are now seeking solutions to

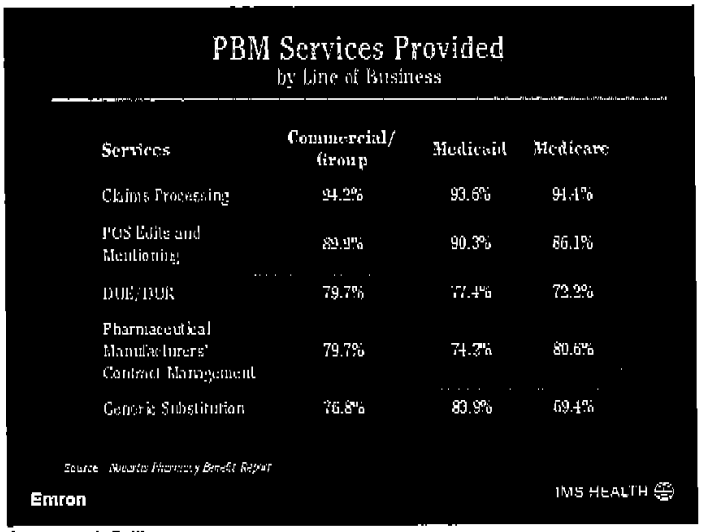
[16] "Concepts in Managed Care Pharmacy Series: Formulary Management," The Academy of Managed Care Pharmacy, April 30, 1998. www.amcp.org. Link to Concepts in Managed Care Pharmacy.
[17] *MANAGED CARE*; Tim Sawyers; March 2000. http://www.managedcaremag.com/archives/0003/0003.pbmeval.html

contain drug costs and eliminate conflicting priorities. Leading solutions include in-house control of pharmacy benefit functions and best value drug utilization.

PBMs generate revenue streams from misaligned formulary design, inappropriate drug switching, buy and bill practices, non-adherence to maximum allowable cost (MAC), markup of contracted services, and/or repackaging & re-pricing tactics. This is particularly evident when the PBM controls the retail network and mail order delivery system. Innovative payers are questioning the PBM practice of moving rebates to unaccounted revenue line items such as data management fees that shelter the PBM from sharing manufacturer incentives.

Escalating litigation in 2003, against traditional PBM financial practices and their unwillingness to accept fiduciary responsibility, has prompted clients and insurers to seek alternatives in managing their prescription drug benefits. Pharmacy payers are now seeking self management solutions to formulary design, rebate administration, network management and other pharmacy benefit services.

The following graph gives an overview of the services provided by PBMs as of 1999.[18]



Acronym definitions:
POS – point-of-service
DUE –drug utilization evaluation (another term for DUR)
DUR – drug utilization review

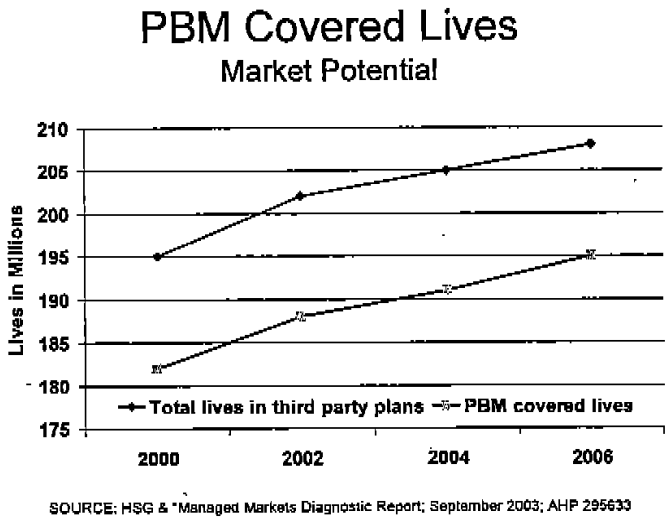
As to how effective all of the above PBM services are in actually controlling the cost trends for the pharmacy benefit is open to debate today. It is generally accepted within the industry that exposing the patient to the cost of pharmaceutical products and encouraging the use of generics product are very effective in reducing the inflationary trend for the benefit. The rest of the above services including rebates, POS edits, formularies, disease management programs, mail order drugs and DUE/DUR activities are coming under increasing skepticism as to their effectiveness.

[18] Novartis Pharmacy Benefit Report 2000.

PBM market

The total number of lives enrolled in benefit programs managed by PBMs has grown slowly over the last four years from 181 million in 1998 to 187 million in 2003. However, PBMs administer prescription benefits for nearly 94% of those with a pharmacy benefit program and this growth closely tracks the increase in total lives enrolled in third party plans.[19]

The following demonstrates the prior and projected growth for the PBM industry.



SOURCE: HSG & "Managed Markets Diagnostic Report; September 2003; AHP 295633

PBM business model

Many PBMs that once earned most of their revenue by administering the pharmacy benefit for payers now earn a large portion of their income from drug companies that pay them undisclosed rebates and other financial incentives for promoting certain pharmaceutical products. The move to this business model has been driven by the fact that the PBMs' clients demand competitive bids that dictate no administrative fees for claims processing; no fees for pharmacy network management; no fees for data analysis and client support; and, in some cases, no mail service dispensing fees.[20]

PBM failure to perform as a fiduciary for the client

In a business model where PBMs have long received the majority of their revenue from a source other than their clients - specifically from drug manufacturers delivering rebate revenue for formulary product placement- it is not surprising that purchasers of PBM

[19] "Managed Markets Diagnostic Report; September 2003; AHP 295618 – AHP 295653

[20] Federal Employees Health Benefits: Effects of Using Pharmacy Benefit Managers on Health Plans, Enrollees, and Pharmacies (January 2003); www.gao.gov

services are becoming restive with this conflict of interest and, in many cases, seek financial restitution.

Critics charge, not altogether unfairly, that the current rebate structure creates a built-in conflict of interest for PBMs because it may inappropriately put the interests of PBMs and pharmaceutical manufacturers before those of the customer health plan, employer or member.[21]

As a direct result of the above, many payers of health care services are currently arriving at a consensus – the PBM service product that now controls pharmacy transactions for 200 million Americans, as currently configured, has outlived its usefulness. The perception is widely held that many of these vendors have been so co-opted by the pharma manufacturers that they no longer serve the best interests of the customer.

Health plan sponsors are now asking PBMs to fully disclose all rebates and revenue sources to demonstrate their commitment to a relationship based on incentive alignment. Disclosure itself should neither increase nor decrease the cost of prescription drugs to consumers, but it will foster an appropriate platform for payors to make informed decisions about their clinical and financial (pricing) strategies.

These payors are now looking for PBMs that will provide quality pharmaceutical care management to members while managing the pharmacy benefit costs for customers. Specifically, they want to see PBMs with a business model wherein they are compensated for the clinical and administrative expertise required in the delivery of and the efficiency with which these services are delivered.

The above is only possible through a transparent revenue model that provides financial incentives for PBMs to always encourage utilization of the most clinically appropriate drug at the lowest possible cost, which was the original charter for the PBMs. The most effective method to manage costs is to drive utilization to the most cost-effective product rather than toward products because of their higher rebates. [22]

PBMs such as AdvancePCS, of Irving, Texas, and the other three major ones – Medco Health Solutions Inc., Express Scripts and Caremark – have been dogged in recent years by litigation and investigations that question whether the companies save much money for their clients.

It is now widely perceived in the market that the large PBMs are steering patients to more-costly medications to maximize their returns on performance based rebate contracts with pharma manufacturers. This inherent conflict of interest behavior is compounded by the PBMs not passing on the rebates they get from drug makers as a result of this activity. As a result, numerous legal actions have been brought against the major PBMs on the basis of these business practices.

In short, full service PBMs have damaged their reputations in the market with the lack of transparency they have consistently demonstrated in their business practices.

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[21] PBMs: Change Business Model or Fight Losing Battle"; Tim Dickman; for *HealthLeaders News*, Oct. 31, 2003 (http://www.healthleaders.com/news/feature1.php?contentid=49601&CE_Session=a4a6ad36ea527022a26c43f93ea14c27)

[22] PBMs: Change Business Model or Fight Losing Battle"; Tim Dickman; for *HealthLeaders News*, Oct. 31, 2003 (http://www.healthleaders.com/news/feature1.php?contentid=49601&CE_Session=a4a6ad36ea527022a26c43f93ea14c27)

PBM consolidation

Industry growth and consolidation have resulted in a few PBMs controlling the industry.[23] Wyeth documents take note of the fact that "consolidation has recently taken the number of PBMs from 80 to 55, with three firms (AdvancePCS, Merck-Medco, and Express Scripts) dominating the market. Today (2001), the top five PBMs control more than 90% of the covered lives in the segment, which is an increase from only 65% five years ago. Currently PBMs provide services to over 114 million lives."[24]

In addition, some larger PBMs "rent" their formularies to smaller PBMs, passing back the rebates that are paid by manufacturers for brand drugs purchased by the smaller PBM's clients' members. This practice of renting out formularies aggregates additional population groups for the larger PBMs to use in their negotiations for rebates from the pharmaceutical manufacturers.

The PBM market can be segmented in various ways.

> "The most common way to segment PBMs is by their size. Size is measured either by lives, claims processed, or revenues. Using this method, there are basically three categories of PBMs. The three large PBMs have over 45 million lives each. They have the highest number of claims processed, dollar value of prescription processed and revenues. These PBMs are the most sophisticated and offer the broadest range of services to their clients including mail service pharmacy.
>
> There are approximately 15 PBMs in the middle tier. These PBMs range between 7 and 20 million lives each. There is some variation in this group with the scope of their service capabilities and their clients. Some PBMs in the middle tier have a strong geographic foothold while others are more national in scope but not as large as the top three.
>
> The remaining PBMs tend to be much smaller in size and more limited in their service capabilities. There are several niche PBMs in this group as well. Some are strictly claims processors. Others may only service a particular client type such as local governments or small employers."[25]

PBM Market Segments

Segment	Description	PBM	Covered Lives
Tier 1	>20 million covered lives.	AdvancePCS	85,000,000
		Merck-Medco	65,000,000
		Express Scripts	48,000,000
		Caremark Rx	20,000,000

[23] WYE167220-167231; Pharmacy Benefit Management Companies Business Plan; Kimberly France, Marketing Manager, Healthcare Systems Marketing; June 19, 2001.
[24] WYE 167223
[25] WYE 167223-167224

Segment	Description	PBM	Covered Lives
Tier 2 & Retail	Smaller PBMs and those owned by retail chains	New Eckerd Health Services	5,000,000
		Prescription Solutions	5,000,000
		Restat	7,000,000
		Walgreens Health Initiatives	4,000,000
Captives	Insurer-owned PBMs	Wellpoint	28,000,000
		Aetna	5,000,000
Other	Other PBMs		128,000,000
		Total	**400,000,000**

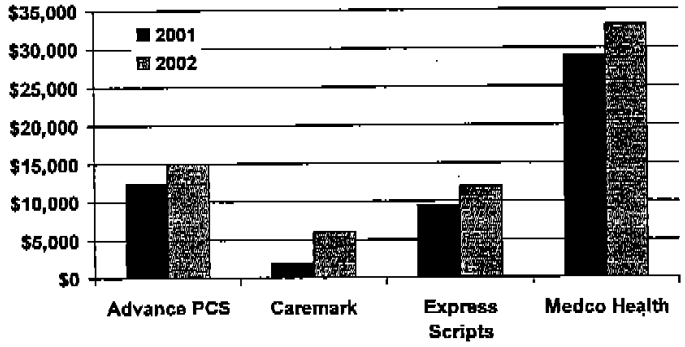
Source: HCFA Study of the Pharmaceutical Benefit Management Industry; HCFA Contract No. 500-97-0399/0097; Dr. Peri Iz; June 2001

While 50 companies are classified as PBMs, there are four significant industry leaders with three PBMs claiming more than 75% of the estimated 188 million lives covered by the PBM industry.

The PBM revenue for the leading companies is demonstrated below (I did not include the MedImpact data displayed in the referenced document in that it did not fall into this criteria).[26]

[26] "Managed Markets Diagnostic Report; September 2003; AHP 295618 – AHP 295653.

PBM Revenue
(in $ millions)

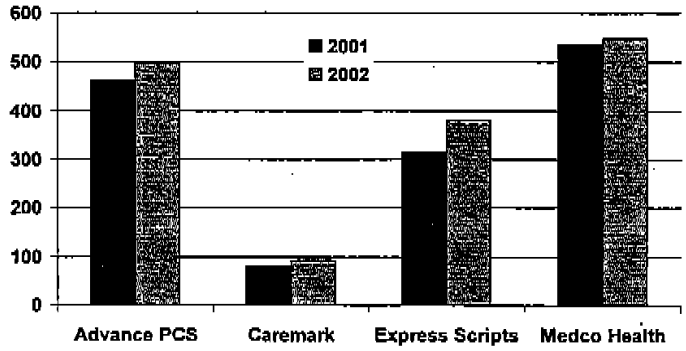


SOURCE: HSG & "Managed Markets Diagnostic Report; September 2003; AHP 295634

While enrollment numbers can be inflated or double-counted, the number of claims processed is much more difficult to manipulate and can be used to verify PBM size. The claims processed by the top five PBMs in 2002 was over 1.61 billion compared to 1.5 billion in 2001, representing a 7% increase. The industry is likely to witness additional consolidation in order to stay competitive and achieve economies of scale. The number of claims processed by the leading PBMs is demonstrated below (once again I omitted the MedImpact data):[27]

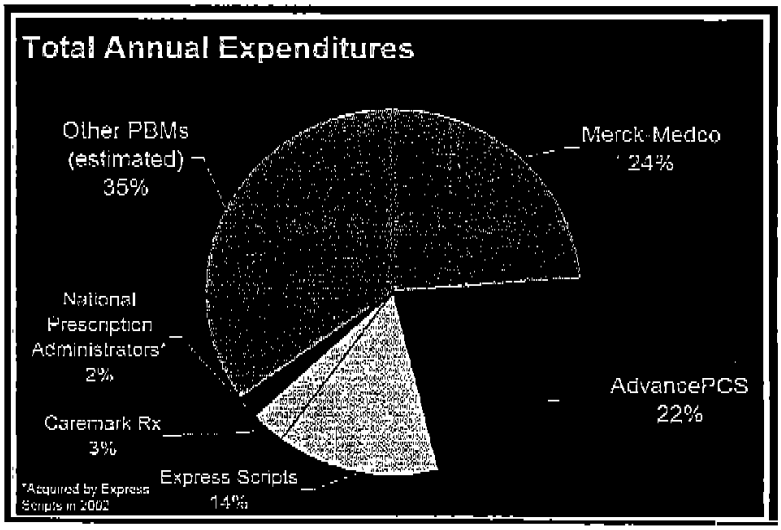
[27] AHP 295635.

PBM Claims Processed
(in millions)

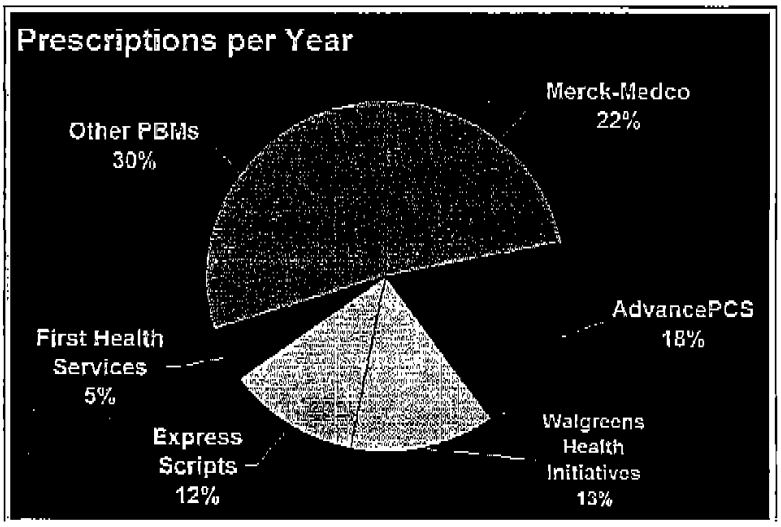


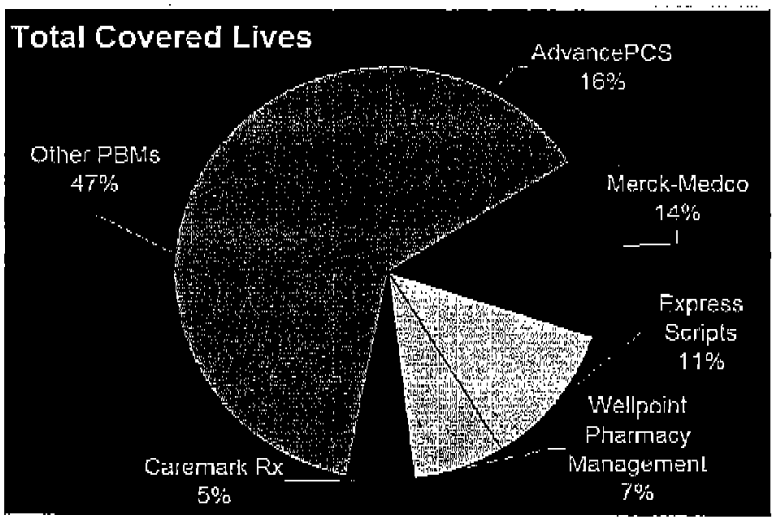
SOURCE: HSG & "Managed Markets Diagnostic Report; September 2003; AHP 295635

The following graphs demonstrate the PBM market share in 2002 by total annual expenditures, prescriptions per year & total covered lives:[28]

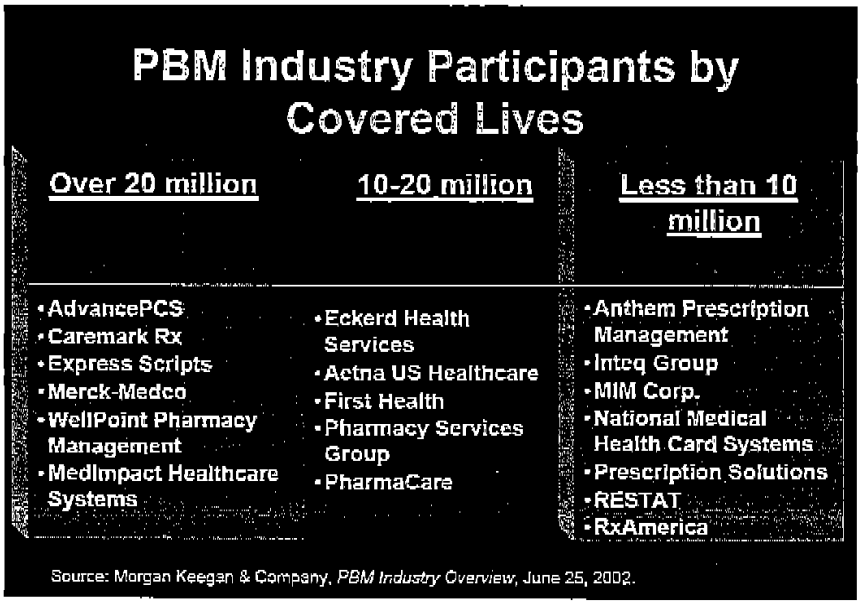


[28] AIS, A Guide to Drug Cost Management Strategies. www.ftc.gov/ogc/healthcarehearings/docs/030626richardson.pdf


Prescriptions per Year
Merck-Medco
22%
Other PBMs
30%
AdvancePCS
18%
First Health
Services
5%
Express
Scripts
12%
Walgreens
Health
Initiatives
13%


Total Covered Lives
AdvancePCS
16%
Other PBMs
47%
Merck-Medco
14%
Express
Scripts
11%
Wellpoint
Pharmacy
Management
7%
Caremark Rx
5%

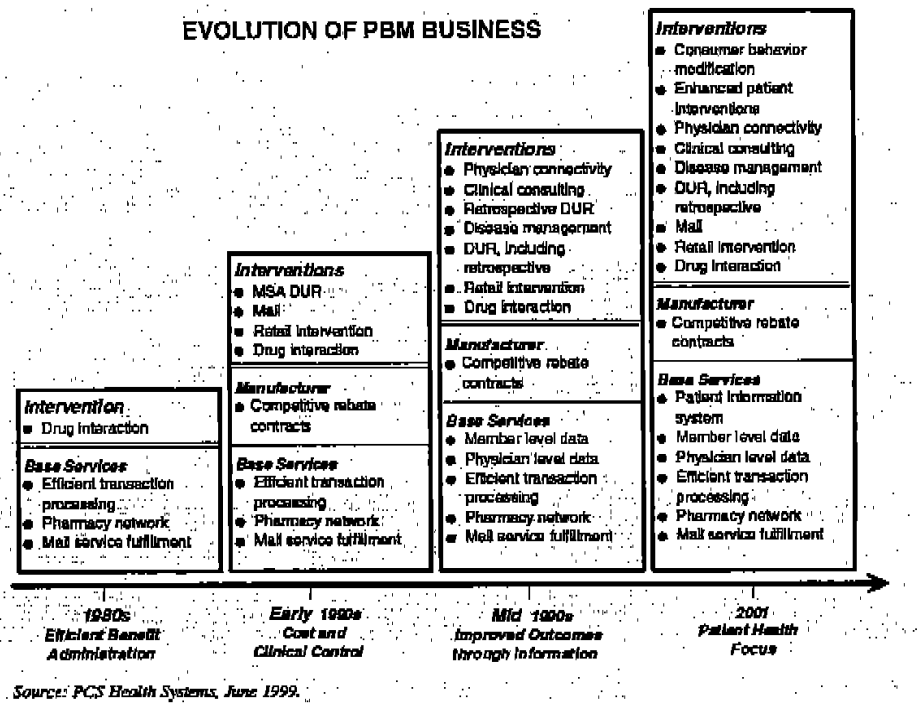
PBM Market Segments



The six largest PBMs each manage greater than 20 million covered lives, own mail pharmacies, and have extensive retail pharmacy networks with national coverage.

The evolving role of the PBM in the market

The following summarizes the role of the PBM in the managed care market from their inception in the mid 80's to the present.



Source: PCS Health Systems, June 1999.

Drug Formularies

Formulary management is the process of developing and maintaining a list of "preferred" drugs, with the intent of promoting cost-effective clinical care. When multiple drugs exist with similar clinical results, issues such as cost-effectiveness and maximizing manufacturer rebates determine which drugs are included on the formulary. A drug's inclusion on formulary is a prerequisite for that drug to be eligible for rebates from its manufacturer. In addition, some rebates are structured such that product positioning as preferred, favored or even exclusive on the formulary is a requirement. Other contracts add performance benchmarking to the rebate payment structure.

All of the above can be summarized as follows: If a PBM can move market share, then the rebate formula is enhanced based upon the product's realized market performance. Formularies are created and administered by PBMs and MCOs today within these contractual realities.

A formulary is a continually updated list of brand and generic drugs developed by the Pharmacy and Therapeutics (P&T) committee of the PBM or MCO. The committee generally meets on a quarterly schedule and reviews drugs that have cleared FDA approval and are now on the market.

David J. Gibson, M.D.

P&T committees generally focus upon the scientific data available concerning new drugs as they become available on the market. They are evaluated as being unique, similar to other already available products within a class of drugs, or occasionally classified as unacceptable based upon risk benefit calculations. The price of the drug and any rebate negotiations are generally not available to the committee.

Once the committee has made its determination as to the scientific importance of a new drug, the PBM will then negotiate rebate amounts and product positioning on the formulary. In general, P&T committees do not become engaged in this business activity. As a result, many clinically and cost effective drugs are routinely excluded from formularies as a matter of course.

Formularies often contain relative cost indices for comparable drugs, highlight preferred brands, and include treatment protocols, usage guidelines, and other clinical information.

Formularies are typically distributed to primary care physicians, but patients and pharmacists may also receive them, generally through Internet downloading. Electronic messages are often returned to pharmacists during claims adjudication indicating formulary status of the drug being dispensed. Formularies are typically produced yearly or every other year, with quarterly updates distributed during the interim.

Formulary management services allow a client to use the PBM's formulary and share in the manufacturer rebates. In general, employers and insurers have the least restrictive drug programs and will use their PBM's formulary, while MCO's have the most restrictive formularies and are more likely to develop their own formulary list of approved drugs. Drug formularies can be "open", "incentivized", or "closed".

- An **Open Formulary** is presented primarily for its historical interest. There are today very few open formularies where product access is not restricted. "Access" and "restricted" are the key operative words here. Frequently three or four tier structured formularies are mislabeled as "open formularies." They are not. Access is available but significant restrictions are in place which will be discussed later in this section under the "three-tier co-payment plan" discussion.

  The benefit plan design underlying the open formulary may have excluded certain drugs (i.e., OTC, cosmetic and lifestyle drugs) in the past. In the old open formularies, most drugs were reimbursed irrespective of their formulary status. There may have been rudimentary tiering of co-payments between brand and generic products.

- An **Incentive Driven Formulary** applies differential co-payments or other financial incentives to influence patients to use, pharmacists to dispense, and physicians to write prescriptions for formulary products.

  Tracking data demonstrates that the market is highly sensitive to financial incentives wherein the consumer is required to contribute increased out of pocket payments for pharmaceutical products. For example, the rate of spending growth for the pharmacy benefit premium fell from 17.3 percent for 2000 to 10.1 percent for 2001.[29]

[29] For a comparison of other recent forecasts, see M. Merlis, "Explaining the Growth in Prescription Drug Spending: A Review of Recent Studies," August 2000, <aspe.hhs.gov/health/reports/ drug-papers/merlis/merlis-final.htm> (29 January 2001); and IMS Health, "IMS Health Forecasts 9 Percent Annual Growth in 10 Leading Global Pharmaceutical Markets through 2005," 14 June 2001,

This deceleration in premium cost trends is directly attributable to consumer cost sensitivity resulting from these out-of-pocket payments.

The introduction of tiered payment structures along with other forms of increased cost-sharing produced this deceleration in cost trend noted above. The lack of newer "blockbuster" drug market introductions contributed as well. This deceleration in cost trend compares favorably to the experience of the mid-1990s. At that time there was minimal consumer financial exposure.[30]

- A **Closed Formulary** limits reimbursement to those drugs listed on the formulary. Non-formulary drugs may be reimbursed if, on an exceptional basis, the drugs are determined to be medically necessary by the health plan.

Physicians, pharmacists, and health plan members are encouraged by PBMs, via mailings, electronic messaging, and other means, to prescribe and dispense formulary drugs. Plan members can also be given financial incentives to use formulary drugs.

Evidence of the prevalence of different formulary types is mixed. About three-fourths of HMOs have preferred or closed formularies (45% preferred or partially closed and 27% closed).[31] There has been a trend away from closed formularies, toward more preferred or partially closed formularies. Health care plans that are more closed systems, such as staff model HMOs; have higher rates of closed formularies (36.4%). In contrast, a survey of employers using PBMs revealed most employers (80%) prefer less restrictive formularies.

The market has evolved since 1999. Employers generally are now more aggressive than are health insurers in pushing members to convert prescriptions from retail to mail-order fulfillment. Employers are continuing to widen the difference between co-pays for second- and third-tier formulary medications. They are also stepping up the number of drugs subject to step-therapy requirements, in which a patient must first try a generic or lower-cost drug before a brand-name or higher-cost medication would be covered.[32,33]

Wyeth enjoyed success in favorably positioning its products on managed care formularies.

"Wyeth-Ayerst product line enjoys favorable coverage on most PBM formularies. Scott Levin's *Fall 2000 Managed Care Formulary Drug Audit Summary Report* identified Premarin, Prempro and Premphase as three of the top five brand name prescription drugs with the overall highest level of formulary acceptance. As a company, Wyeth-Ayerst is well positioned to pursue marketing initiatives base on *contracting platforms*."[34]

"Wyeth-Ayerst branded oral pharmaceutical sales through PBMs/processors are 30.9%. This figure, however, does not include the 14% of Wyeth sales that are through mail. Sixty-five percent of Wyeth-Ayerst sales are

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<www.imshealth.com/public/ structure/dispcontent/1,2779,1341-1341-129257,00. html> 5 (27 December 2001).

[30] Stephen Heffler, Sheila Smith, Greg Won, M. Kent, Clemens, Sean Keehan, and Mark Zezza; "Health tracking Trends;" HEALTH AFFAIRS; *March/April 2002*

[31] Novartis 1999

[32] "Managing Drug Costs"; *MANAGED CARE WEEK*; Nov 11, 2003,

[33] http://www.aishealth.com/DrugCosts/MCWAggressive.html

[34] "Contracting platforms" represent structures defined in the "Premarin Pre-emptive Plan" WYE 167226-167227.

> managed/adjudicated by a controlled HMO or PBM (including mail service). In 2000, total Rx sales through PBMs were $1.6 billion dollars (minus $150 million in rebates). Merck-Medco alone accounted for over 31% of those sales and became the first PBM/Mail service pharmacy to be represented on the top ten list for Wyeth-Ayerst customer sales."[35]

This favorable formulary positioning has continued to the present. As one of Wyeth's core promoted products, Premarin enjoyed a favorable formulary position on formulary/2nd tier or better relative to its individual market throughout the relevant period of 1999-2003. Prior to the spring of 2003, Premarin was essentially on all formularies in a favored position (see, e.g., WYE 119535 and WYE 204989). Premarin enjoyed the most favorable position compared to branded competitors within its market.[36]

Clients have the option of developing their own formulary or customize their PBM's national (i.e., standard) formulary. The purpose of exercising this option, to develop a formulary that better meets the needs or preferences of their practitioners and patients. This is typically done by health plans that have their own Pharmacy and Therapeutics (P&T) committee. Wyeth recognized the importance of this sub segment of the market:

> ..."In cases where the PBM is only playing an administrative role for the customer, the customer will develop its own formulary, which will be the key factor in influencing patient demand. As PBMs serve clients who develop and manage their own formulary, it is the client's formulary status and position of the product in question that will most likely impact utilization."[37]

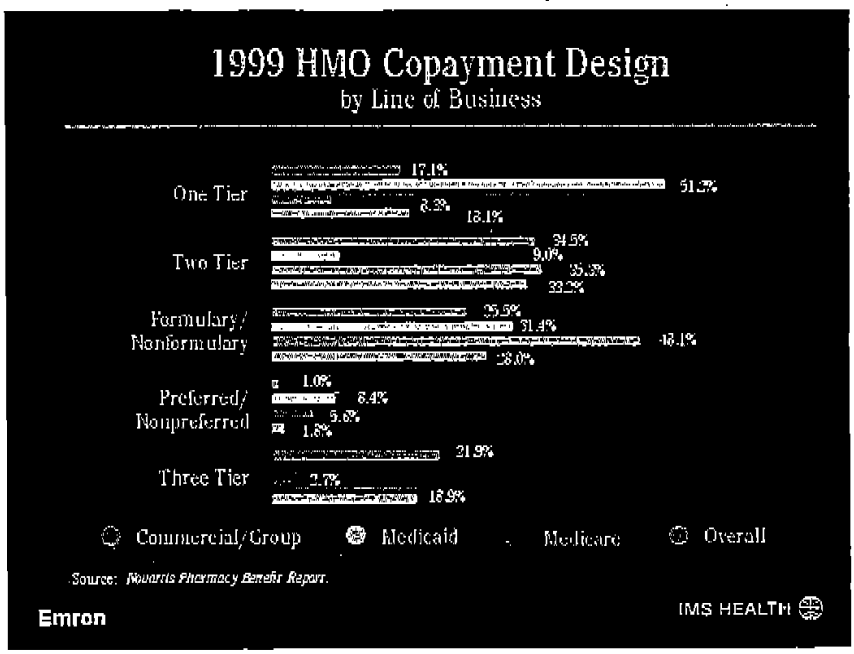
When customizing a formulary, PBMs encourage their clients to consider the impact that deviations from the PBM's national, standard, formulary can have on their rebates.

PBMs routinely administer customized formularies on behalf of their MCO clients. Some large MCOs negotiate rebates directly with manufacturers and administer their own rebate programs.

Copayment structure description

Cost sharing requirements in prescription drug programs require consumers to pay a portion of the cost of each prescription they obtain. This is referred to as the patient's copayment. The following graph illustrates the co-payment design prevalence within the market as of 1999.[38]

[35] WYE 167226
[36] AHP 295621 – "Managed Markets Diagnostic Report"; September 2003.
[37] WYE 167227
[38] Novartis Pharmacy Benefit Report 2000.



Wyeth made note of the increasing frequency of third tier structuring by payers. "The number of plans instituting a 3-tiered copay structure in 1998 was 36%. By the spring of 2000, that number had grown to 80%. With the potential shift from a defined benefit to a defined contribution model becoming more appropriate consumers will become even more sensitive to price differences among products that are characteristic of tiered co-pay arrangements."[39]

As a cost control effort of PBMs, copayments are targeted toward consumers in an attempt to shift some responsibility to them for the cost of their prescription utilization, raise their sensitivity to the cost of that utilization, or to encourage consumers to purchase formulary drugs that earn the PBM lucrative rebates. In this respect, copayments are used to provide incentives to encourage the use of drugs for which the PBM receives rebates from drug manufacturers.

Effectively, copayment requirements are a component of the benefit structure for prescription drug coverage and thus can vary across health plans managed by a given PBM.

Wyeth understood that the market sensitivity to brand retention was directly related to the size of the co-payment. The following data is taken from a study by Putnam Associates for Wyeth as part of their pricing planning.[40]

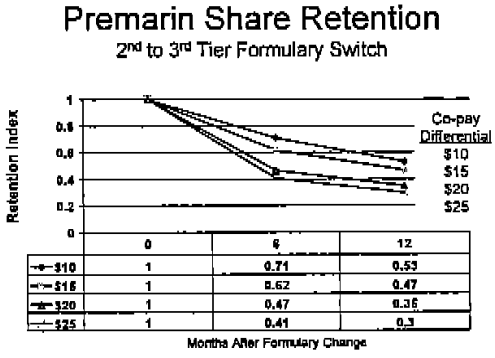
[39] WYE 167224
[40] Putnam Associates; The Premarin Family Pricing Project; August 21, 2002; AHP 256800-256935.

The Putnam Associates Brand/Co-pay Sensitivity Matrix developed for Wyeth: 6-Month Share Retention based upon Co-pay differential[41]

Brand	Co-pay Differential			
	$10	$15	$20	$25
Prozac	0.82	0.77	0.67	0.36
Prilosec	0.75	0.68	0.55	0.50
Premarin				
Zocor	0.66	0.56	0.38	0.31
Prempro/PVC				
Fosamax	0.60	0.48	0.27	0.19

Differential brand/generic copayments specify higher copayment amounts on prescriptions for brand name drugs and lower amounts on prescriptions for generic drugs.

The following graph, taken from the same Putnam Case-Study Analysis,[42] demonstrates that at an average co-pay differential of $20 between the 2nd-3rd tier formulary position costs for Premarin, a predicted 53% of the market will be lost at 6 months and 65% will be lost at 12 months.



Source: Putnam Case-Study Analysis WA05 020821 / AHP 256843

[41] AHP 256842
[42] AHP 256843

The following table illustrates the average copayments that existed in the commercial/group markets in 1999.[43]

1999 Commercial/Group
Average HMO Copayments

Types	Most Common	High	Low
Third Tier	$23.92	$31.00	$20.84
Formulary - Brand	$11.63	$18.12	$7.18
Formulary - Generic	$6.38	$9.59	$3.99
Formulary - Preferred	$10.92	$16.26	$6.68
Nonformulary - Brand	$20.24	$26.38	$15.67
Nonformulary - Generic	$9.74	$13.10	$6.22

Source: Novartis Pharmacy Benefit Report

Enron

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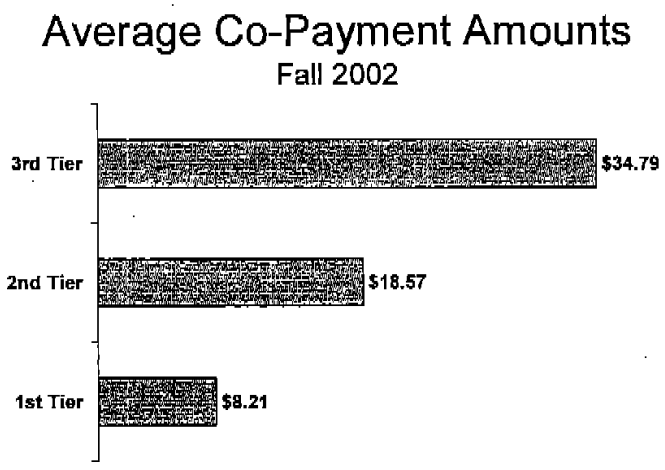
As market conditions have changed, co-payments generally increased. The following demonstrates this increasing trend as of the Fall of 2002.

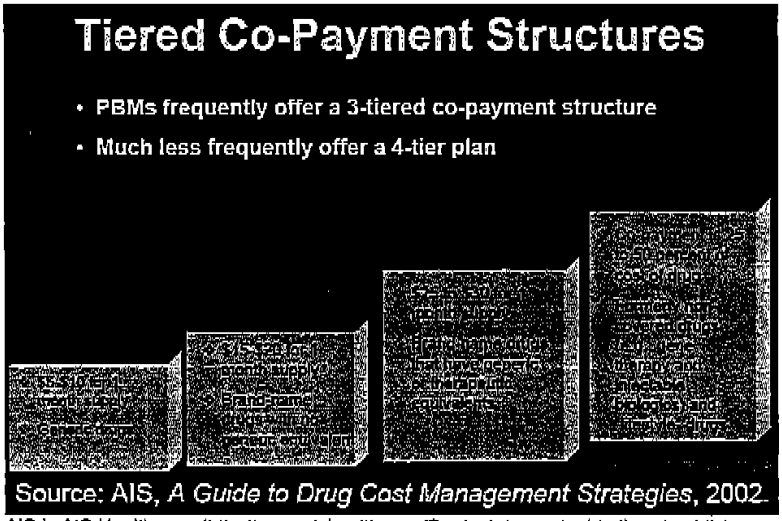


Source: Scott-Levin; Managed Markets Customer Planning, 02/02
AHP340926

[43] Novartis Pharmacy Benefit Report 2000.

Tiered Co-Payment Structures

The following graph illustrates the structure of the various co-payment designs in the market today.



AIS is AIS Health.com (http://www.aishealth.com/Products/newsdcr.html) and publishes the *Drug Cost Management Report.*

Two Tier Co-Payment Plans

The traditional co-payment structure for health plans has been the two tiered structure. Within this structure, there are only two co-payments. The first applies to generic drugs and carries a low co-payment amount, generally in the range of $5 to $10 per prescription fill.

The second tier consists of a co-payment amount for brand drugs on the formulary. These co-payment amounts have generally been two to three times the amount for the generic script.

All other brand drugs, not on the formulary, are not covered and the patient must pay the full retail price out of pocket for this medication unless the physician has obtained a prior authorization from the PBM for this drug.

Three Tier Copayment Plans:

Increased demand for access to drug products by health plan members and rising pharmacy benefit plan costs for the health plan payers, have resulted in rapid adoption of a three tier copayment plan design.

Three tier copayment plan designs allow non-formulary drugs to be included within a member's drug benefit, which would not have been included in the two tier copayment plan design. The health plan member is charged a higher tier three copayment amount when a non-formulary brand drug is dispensed within their drug benefit.

The third tier copayment is their plan's highest copayment amount, often sizably more than the formulary brand drug copayment amount, since PBMs want to discourage use of drugs that cut into the market share of their formulary drugs.

Wyeth recognized the market dynamic that three tier copayment structures introduced into the managed care market:

> "Over the past 24 months, the landscape has changed within the managed care industry. Access has become moot with the implementation of 3-tiered (or more) copayment structures. Moving forward, Wyeth will employ a three-pronged approach in this customer segment. The first step is to maximize product growth where formulary position is optimal. Secondly, we need to drive demand with providers and patients when position may be an obstacle. Lastly, we must engage other entities, such as benefits consultants, who can drive Wyeth products with PBMs at other points of influence. These efforts will augment our existing competencies within the managed care market place."[44]

Tier three copayments impact plan members

Although a three tier copayment plan design allows for non-formulary drugs to be covered by a member's health plan, the member must pay the plan's highest copayment amount to acquire a non-formulary prescription.

Tier three co-payments often times create problems for the health plan members at the point of service in the pharmacy. In general most members are not totally familiar with all the elements of their prescription benefit plan. They are usually aware, if they have a prescription benefit, that they have a copayment responsibility for their prescriptions, and that generic drug copayments are less than brand drug copayments. The generic and brand drug copayments are usually fixed dollar amounts the member understands and remembers.

With the introduction of a tier three copayment, which may be a variable dollar amount, confusion often occurs at the pharmacy counter when the member is picking up their prescription because their copayment is not what they expected it to be.

When this situation occurs it is uncomfortable for the patient and time consuming for the pharmacy personnel. It can also create doubts in the member's mind about their physician's competency and knowledge of prescribing within the parameters of their prescription benefit plan.

PBM adjudication interface with pharmacy providers

One of the key services PBMs provide is the online adjudication of drug claims from pharmacies commonly referred to as claims processing. This process examines the member's eligibility and drug coverage to determine the pharmacy's reimbursement and member's copayment. In addition, edits are applied to ensure the clinical appropriateness of the drug dispensed and to increase formulary compliance.

The claims adjudication process begins at the point of service at the pharmacy. Upon receipt of the prescription, the pharmacist enters it into the pharmacy computer along

[44] WYE 167222 - 167223; Pharmacy Benefit Management Companies Business Plan; Kimberly France, Marketing Manager, Healthcare Systems Marketing; June 19, 2001.

with information from the member's drug card. This information is then electronically transmitted to the PBM's claims processing system.

Once the PBM's claim processing system receives the claim, it is adjudicated and the pharmacist receives a response confirming the member's eligibility and drug coverage. The pharmacist is informed as to the amount the pharmacy will be reimbursed together with the member's copayment to be collected.

During claims processing, the information submitted by the pharmacy is checked against the health plan's eligibility file to validate the member's name, benefit plan, and birth date. Upon confirming eligibility, the prescription is checked against the benefit design to confirm drug coverage and the corresponding copayment to be paid by the member. The claims processing system also determines the type of network pharmacy submitting the claim (either mail or retail), and calculates the appropriate reimbursement of ingredient costs and dispensing fee for the pharmacy.

The entire adjudication process is usually completed in a matter of several seconds. The PBM claims adjudication process is an on-line real-time transaction, much like a credit card transaction.

Rebates paid by pharmaceutical manufacturers to PBMs and MCOs

Rebates are not product discounts

The term "rebate" is defined by the Merriam-Webster dictionary as "a return of a part of a payment.[45]" It should be noted that rebates are not product discounts. They are fees paid to the PBMs or MCOs by the manufacturers as an inducement for including the manufacturer's product on the formulary and the payment is enhanced for favorable placement as a preferred product. Often the terms of individual rebate agreements are confidential and are not made public to the plan sponsor, the patient or the prescribing physician."[46]

Thus the rebate does not track with the product throughout the distribution chain from the manufacturer to the point of dispensing. In addition, rebates are frequently linked to incentives. These incentives bundle product groups and, in the case of Wyeth, had the potential of adding an additional 3 – 5% of the DCP as an incentive.[47] This bundling of product rebates leveraged the dominant position Wyeth enjoyed in the oral estrogen market into other classes of drugs such as oral contraceptives and antidepressants (Effexor).

Within this business structure, the entity purchasing the product may or may not receive a portion of the rebate. These rebates are delivered months after the transaction, generally 6 to 9 months later, to the PBM or MCO, not the customer. The rebate amount is generally based upon market share performance for the product on the formulary within its class rather than representing a discount on the actual purchase price for the product.

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[45] The Merriam-Webster Collegiate Dictonary; Eleventh Edition;First Printing 2003; p.1037.
[46] "Tug-of-War over Rebates"; Robert DiChiara, Patricia Pesanello, and Ellen Cappelino; *American Druggist*; May 1997.
[47] WYE009115 - Sec III, graph on group incentives

PBM and MCO contracting with pharmaceutical manufacturers most often involves negotiations between the two parties to determine positioning of the manufacturer's drug products on the formulary.

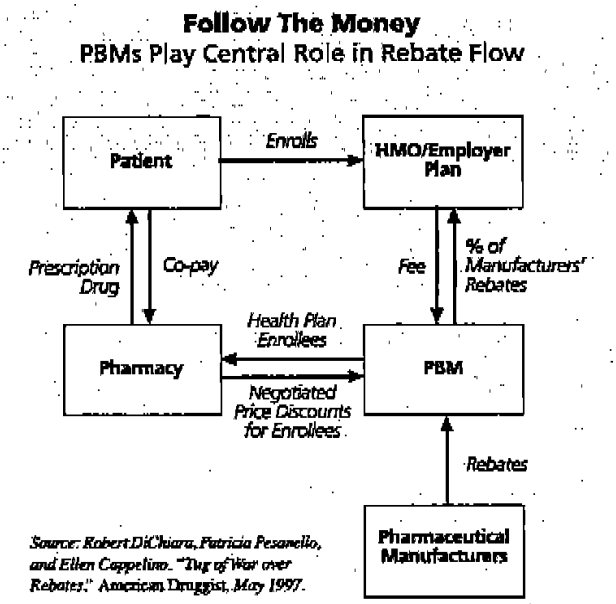
Rebate definition

Brand pharmaceutical manufacturers usually enter into rebate contracts with PBMs and MCOs to maintain, protect or grow market share of their drug products and/or receive information and services from the PBMs and MCOs. Wyeth, leveraging its dominant position in the oral conjugated estrogen market, took the above rebate contracting to a more aggressive level. Wyeth entered into contracts with PBMs and MCOs to inhibit a competitor's entrance into the market.[48]

Generic drug manufacturers do not enter into these types of contracts because the PBM or MCO does not influence which generic brands are carried at the retail pharmacy.

Formulary positioning and the number of formulary drugs within a drug's product category are key factors which impact the drug's sales volume and market share within its therapeutic class. In creating a drug formulary where there are multiple sources within a given therapeutic class for product, the issue of rebates frequently becomes paramount to the PBM or MCO when determining formulary positioning for a drug.

The following graph demonstrates the flow of money within the typical rebate contract:



[48] WYE012690-91

Rebates now represent a significant component of PBM income:

As the PBM industry continues to consolidate the price competition for PBM services is becoming more aggressive. In order for PBMs to attract new clients there must be an incentive for such clients to transition from their existing PBM. These incentives exist as service enhancements and/or lower pricing from the PBMs for their core claims administrative services.

In the past PBMs have obtained a substantial portion of their profits from claims administration fees charged to their clients for processing the prescriptions of their members. In addition to the claims administration fees PBMs have derived profits from drug manufacturer rebates and administration service fees, clinical service program fees, and differentials in pricing between the amount charged to their clients and the amount paid to their pharmacy providers, for member prescriptions processed.

As the PBM industry competes aggressively for new clients, the PBM profits derived from their administration fees has diminished and their manufacturer rebates with their associated manufacturer derived administration fees have become a more significant component of the PBM's total profitability. For some PBMs brand.drug manufacturer rebates and associated fees account for over 50% of their total gross margin dollars. This makes drug manufacturer rebates and their associated fees extremely important to the profitability of most PBMs.

The importance of rebates

The following hypothetical example illustrates the power rebate contracts have in the market where a new entrant challenges an existing manufacturer that holds a dominant market position within a class of drugs. The example uses the conjugated estrogen market to illustrate the concept.

The following issues are illustrated in the following graph:

1. The importance of the rebate can and generally has exceeded the importance of product price as the MCO creates its formulary.
2. Rebates only apply to brand products. Therefore, even with a 19% market share, generic Estradiol is not a player in the rebate formulation.
3. Premarin's overwhelming market share gives the product great leverage in the rebate generated for the MCO.
4. Thus, if a manufacturer such as Wyeth threatens to withdraw the rebate for reduced market share performance, a competitor can not overcome this advantage even with reduced WAC and increased rebates.

Rebate Example

Drug	Premarin 0.625 mg	Cenestin 0.625	Menest[1] 0.625	Generic Estradiol[2] 1 mg
AWP	$0.96	$0.87	$0.54	$0.32
% Rx	75%	3%	3%	19%
# Rx	2717	93	122	686
Cost AWP/30d	$78,250	$2,427	$1,976	$6,586
Rebate % WAC	5%	15%	20%	0%
Rebate $	$3,138	$288	$314	$0

1. Menest is an esterified estrogen. It contains a mixture of the sodium salts of the sulfate esters of the estrogenic substances, principally estrone, that are of the type excreted by pregnant mares.

Rebate amount and allocation to the PBM's clients:

Rebates and administrative fees are commonly calculated and paid as a percent of the drugs' cost, generally defined by the manufactures direct catalogue price (DCP). The size of the rebate can range up to 15% of DCP. Rebates greater than 15% are rare, since they might cause manufacturers to exceed their "Medicaid Best Price" rebates and trigger re-pricing of government contracts.

The Medicaid rebate program, established by the Omnibus Budget Reconciliation Act of 1990, was established to help contain government spending on outpatient prescription drugs. Under the basic rebate formula, pharmaceutical manufacturers pay a rebate equal to at least 15.1 percent of the average price they earn on sales to retail pharmacies for brand-name drugs purchased by Medicaid beneficiaries. The basic rebate is often higher than that 15.1 percent minimum because of a "best-price" provision that gives Medicaid access to the lowest price paid by any private purchaser in the United States.

The best-price provision increases the Medicaid rebate when a manufacturer gives a discount that exceeds the minimum rebate of 15.1 percent. In such cases, the Medicaid rebate is equal to the largest reported discount given to any private sector purchaser. Since Medicaid constitutes about 12 percent of the outpatient prescription drug market, pharmaceutical manufacturers are less willing to give large private purchasers steep discounts because they are required to give Medicaid access to the same low price.[49]

[49] "Pricing Mechanisms Used By The Federal Government To Contain Prescription Drug Costs", by Anna Cook, Ph.D., Mathematica Policy Research, Inc., *August 8-9, 2000,Leavey Conference Center, Georgetown University, Washington, DC*

Factors influencing rebate levels

There are several factors that may influence the level of rebate provided to PBMs or MCOs by pharmaceutical manufacturers for listing their drug(s) on formulary:

1. The number of drug product classes of the pharmaceutical manufacturer's products that are included in the formulary.
2. The number of individual drug products that are included within each drug product class for the contracting pharmaceutical manufacturer.
3. The degree of control over drug product selection which is afforded by the PBM's drug plan design:
   - **Low control:** The formulary is considered "open" with no prescribing restrictions within the coverage of the member's drug benefit; without benefit designs or financial incentives tied to formulary drug selection. Rebates are rare at this level of formulary control.
   - **Medium control:** There are plan design and/or financial incentives tied to formulary drug selection.
   - **High control:** The formulary may be considered "closed" in which case only those products listed on the formulary are included within the member's drug benefit; or, the formulary may indicate certain drugs as "preferred" with substantial plan design and/or financial incentives tied to preferred drug product selection, or financial disincentives associated with the selection of a non-preferred product.

Rebates are paid for formulary position, which impacts the market share of the pharmaceutical manufacturer's drug product.

The primary concern of the pharmaceutical manufacturers is that their products are included on the formularies. They also don't want any negative positioning or financial disincentives for their drugs compared to their competitor's products.

The amounts of the rebates paid vary depending on the contracting abilities of the PBM, the number of covered lives, the pharmacy benefit, and the group's utilization patterns.[50]

[50] "Managed Care Pharmacy Practice", Robert P. Navarro, Aspen Publishers, Inc. 1999, page 71

Electronic Pharmacy Computer Systems:

Pharmacies process prescriptions electronically through their pharmacy computer system. As previously described, when a patient submits a prescription to a retail pharmacy to be filled and dispensed, the prescription is entered into the pharmacy's computer system for processing and data warehousing. If the patient has a drug benefit that provides payment coverage for their patient's prescription, the pharmacy adjudicates the prescription information on-line, real-time to the appropriate PBM for processing and payment. The PBM verifies the patient's eligibility and drug coverage, performs numerous checks and edits on the submitted prescription information and returns electronic messages to the submitting pharmacy.

The information received from the PBM by the pharmacy will indicate several things to the pharmacist, such as:

- If the patient is eligible for prescription coverage
- If the submitted prescription is covered by the patient's drug benefit plan
- The patient's copayment amount
- Drug utilization safety messages

NDC Blocks:

NDC blocks are system edits, administered by PBMs, which are put in place to indicate that a uniquely identified drug is being blocked from coverage within a patient's drug benefit plan. NDC Blocks are sometimes applied to a specific drug within a therapeutic class indicating that drug is not included in the formulary of a patient's health plan.

When a pharmacy submits a drug, which has an NDC block in the PBM's system, it will receive back a "reject code" from the PBM administering the patient's pharmacy benefit. This reject code is an indication to the pharmacy that the submitted drug is not covered by the patient's health plan.

An NDC block is one of the most effective tools the PBM uses to prevent a non-formulary drug from being dispensed to a patient with a drug benefit plan.

Soft Edits:

Soft edits are advisory messages, returned to the submitting pharmacy from the PBM during the prescription adjudication process. The purpose of a soft edit message is to alert and educate the pharmacist about the prescription being processed.

Often times a soft edit message will alert the pharmacist that there is a drug which is "preferred" by the health plan as an alternative to the drug that was initially submitted by the pharmacist.

The soft edit does not stop the submitted drug from being processed and paid, unlike an NDC block, but rather it suggests to the pharmacist to consider contacting the prescribing physician and recommend an alternative drug to the one originally prescribed. (There may be financial incentives for the pharmacist to contact the physician.)

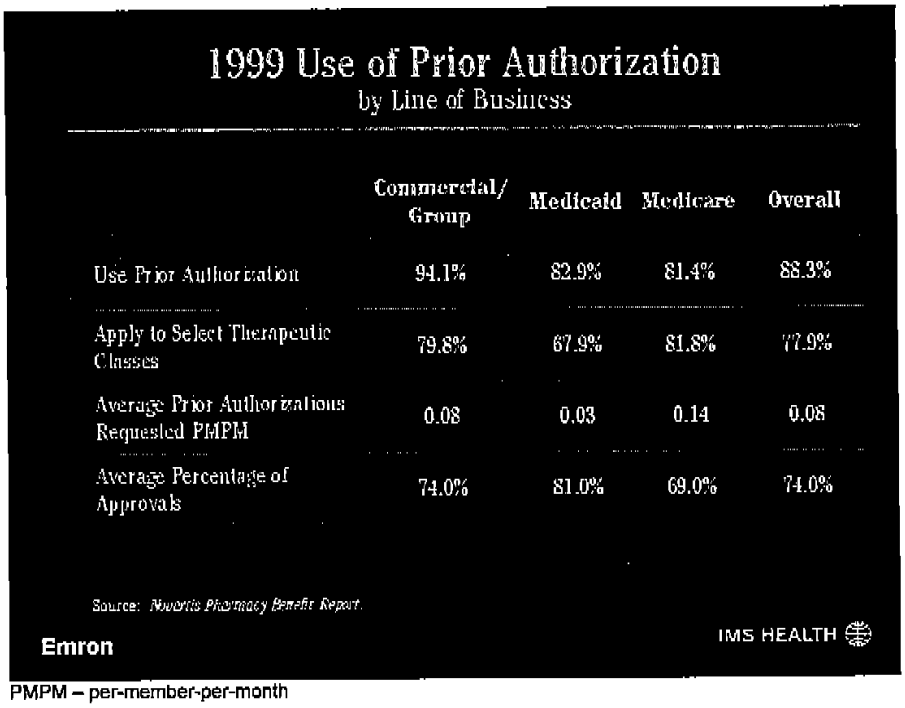
In addition to the above, the retail pharmacy may also insert messages that alert the dispensing pharmacist of incentive programs that may exist between the manufacturer and the retail company.

Soft edits are an effective tool that PBMs use to increase formulary compliance and preferred drug utilization in drug benefit plans that have an open formulary structure.

Prior Authorization:

Some drugs are indicated on the PBM's formulary as requiring the prescribing physician to obtain prior authorization from the member's health plan before the drug is eligible for payment within the member's drug benefit.

The following table summarizes the use of prior authorization by line of business within the managed care dominated health care environment in 1999.[53]



1999 Use of Prior Authorization
by Line of Business

	Commercial/ Group	Medicaid	Medicare	Overall
Use Prior Authorization	94.1%	82.9%	81.4%	88.3%
Apply to Select Therapeutic Classes	79.8%	67.9%	81.8%	77.9%
Average Prior Authorizations Requested PMPM	0.08	0.03	0.14	0.08
Average Percentage of Approvals	74.0%	81.0%	69.0%	74.0%

Source: *Novartis Pharmacy Benefit Report.*

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PMPM – per-member-per-month

Prior authorizing a drug can be a significant barrier to its being prescribed by the physician and subsequently dispensed by the pharmacy provider. Prior authorizations are a discouragement for the physician to prescribe drugs that are not on formulary. Prior authorizations represent one more "hoop the physician must jump through" to get a health plan to approve payment for a non-preferred drug.

Prior authorization is usually required for the most expensive drugs, especially if there is a cheaper alternative available. Prior authorization is also frequently required even in the case of one-of-a-kind drugs for which there are no alternatives available. In these cases, prior authorization is used to make sure that the drug is not being prescribed for an unapproved use.

The process of obtaining a prior authorization for the physician can range from a relative simple process to a very complex process which may involve step therapy protocols,

[53] Novartis Pharmacy Benefit Report 2000.